NON-PUBLIC?: N
ACCESSION #: 8810040011
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Salem Generating Station - Unit 1 PAGE: 1 OF 3

DOCKET NUMBER: 05000272

TITLE: Turbine Trip/Reactor Trip From 100% Power - Low Auto Stop Oil Pressure
EVENT DATE: 08/31/88 LER #: 88/015/00 REPORT DATE: 09/27/88

OPERATING MODE: 1 POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: M.J. Pollack - LER Coordinator TELEPHONE: 609/339/4022

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE TO NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT: On August 31, 1988 at 0509 hours, a Reactor Trip/Turbine Trip occurred due to low Auto Stop Oil System (TG) pressure. The apparent cause of this event has been attributed to an equipment problem. It has been determined that a pressure reducing 1/32" orifice probably clogged during functional testing of the turbine trip mechanisms. The functional testing of the turbine trip mechanisms was subsequently completed satisfactorily. The functional testing procedure has been modified to include a step to closely monitor auto stop oil pressure during performance of testing. The two pressure reduction orifices in the Auto Stop Oil System were cleaned. Preventive maintenance requirements for the Auto Stop Oil System will be expanded to include thorough cleaning of the system and will be scheduled during refueling outages. The overhead annunciation for Low Auto Stop Oil Pressure will be modified to alert Operations personnel of decreasing auto stop oil pressure. Presently the alarm is set to annunciate upon auto stop oil pressure decreasing to the trip setpoint.

END OF ABSTRACT

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as (xx)

IDENTIFICATION OF OCCURRENCE:

Turbine Trip/Reactor Trip From 100% Power - Low Auto Stop Oil Pressure

Event Date: 8/31/88

Report Date: 9/27/88

This report was initiated by Incident Report No. 88-382.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 Reactor Power 100% - Unit Load 1120 Mwe

DESCRIPTION OF OCCURRENCE:

On August 31, 1988 at 0509 hours, a Reactor Trip/Turbine Trip occurred due to low Auto Stop Oil System (TG) pressure.

The Unit was stabilized in Mode 3 (Hot Standby). At 0616 hours the same day, in accordance with the requirements of the Code of Federal Regulations 10CFR 50.72 (b) (2) (ii), the Nuclear Regulatory Commission was notified of the automatic actuation of the Reactor Protection System (JC).

APPARENT CAUSE OF OCCURRENCE:

The apparent cause of this event has been attributed to a equipment problem.

Prior to the trip, Operating Instruction OI-III-1.3.7, "Turbine Automatic Trip Mechanism Operational Tests" was initiated. This procedure is used to functionally test the various turbine trip mechanisms (i.e., Condenser Low-Vacuum, Thrust Bearing Wear, Low Bearing Oil Pressure, and Solenoid Actuated trips). During the testing cf the Condenser Low-Vacuum Trip, the Turbine Trip/Reactor Trip occurred. Investigation could not conclusively identify the root cause of the trip. However, it has been determined that the primary supply pressure reducing 1/32" orifice probably clogged. The orifice reduces auto stop oil pressure from 300 psig to 95 psig. When the Auto Stop Oil System was placed in test and the Condenser Low-Vacuum Trip

tested, oil drained from the trip block as required by the test, however, due to the clog in the orifice, oil was not made up at a rate sufficient to keep auto stop oil pressure above 55 psig during the period of time when the secondary bleed off orifice was in service. Auto stop oil pressure reduced to the turbine trip setpoint resulting in the reactor trip.

Investigation revealed traces of sludge on the lip of the orifice.

ANALYSIS OF OCCURRENCE:

The source of oil for the Auto Stop Oil System is the Main Turbine Lube Oil System. The "Low Auto Stop oil Pressure" reactor trip is an anticipatory trip to a reactor trip caused by a turbine trip when power is above 10% (permissive P-7). This trip provides turbine protection by reducing the severity of an ensuing transient. No credit is taken in the accident analyses for the operation of this trip. Investigation revealed that the trip setpoint was set at approximately 55 psig.

This occurrence involved no undue risk to the health and safety of the public. However, because of the automatic actuation of the reactor protection system, the event is reportable in accordance with the Code of Federal Regulations 10CFR 50.73 (a) (2) (iv).

Subsequent to the trip, it was decided to complete various corrective and preventive maintenance tasks including a Service Water leak associated with No. 13 Containment Fan Coil Unit (CFCU), inspection and preventive maintenance to the positioner linkage of all BF19 valves (reference LER 311/88-017-00), repair a body to bonnet leak from the 1PS29 valve (lPS3 Outlet Isolation Valve) and repair of the 1PS1 valve (Pressurizer Spray Valve) seat leakage.

CORRECTIVE ACTION:

The maintenance activities identified in the Analysis of Occurrence section were completed and the Unit returned to service on September 7, 1988.

The functional testing of the various turbine trip mechanisms, per procedure III-1.3.7 was completed satisfactorily and has been, modified to include a step to closely monitor auto stop oil pressure, during performance of testing.

The two pressure reduction orifices in the Auto Stop Oil System were cleaned.

Preventive maintenance requirements for the Auto Stop Oil System will be expanded to include thorough cleaning of the system during refueling outages.

The overhead annunciation for Low Auto Stop Oil Pressure will be modified to alert Operations personnel of decreasing auto stop oil pressure. Presently the alarm is set to annunciate upon auto stop oil pressure decreasing to the trip setpoint.

General Manager -
Salem Operations

MJP:pc
SORC Mtg. 88-080

ATTACHMENT 1 TO 8810040011 PAGE 1 OF 1

PSE&G
Public Service Electric and Gas Company P.O..Box E Hancocks Bridge,
New Jersey 08038
Salem Generating Station

September 27, 1988

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

SALEM GENERATING STATION
LICENSE NO. DPR-70
DOCKET NO. 50-272
UNIT NO. 1
LICENSEE EVENT REPORT 88-015-00

This Licensee Event Report is being submitted pursuant to the requirements of the Code of Federal Regulations 10CFR 50.73 (a) (2) (iv). This report is required within thirty (30) days of discovery.

Sincerely yours,

L. K. Miller
General Manager
Salem Operations

MJP:pc

Distribution

*** END OF DOCUMENT ***

ACCESSION #: 8810040069